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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/008,606

12/06/2001

Jeff Raynor

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2477

7590

07/27/2004

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EXAMINER

ALLEN, STEPHONE B

ART UNIT

PAPER NUMBER

2878

DATE MAILED: 07/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

15.5.

## Office Action Summary

Application No.

10/008,606

Applicant(s)

RAYNOR, JEFF

Examiner

Stephone B. Allen

Art Unit

2878

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 21 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 11-40 is/are pending in the application.
- 4a) Of the above claim(s) 16-19,25-28,34-37 and 41-44 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11,14,15,20,23,24,29,32,33 and 38 is/are rejected.
- 7) ☒ Claim(s) 12,13,21,22,30,31,39 and 40 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Drawings***

Examiner acknowledges receipt of the proposed drawing modifications filed on December 6, 2001. The proposed drawing corrections have been approved by the examiner.

### ***Election/Restrictions***

Applicant's election without traverse of the Group I invention of Claims 11-15, 20-24, 29-33 and 38-40, filed on 21 April 2004 is acknowledged.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 11, 14, 29, 32 and 38 are rejected under 35 U.S.C. 102(b) as being anticipated by Kato (5,682,203).

With respect to claims 11 and 14, Kato discloses a solid state image sensor comprising an array of pixels 2 and a corresponding array of micro-lenses 3 disposed adjacent the array of pixels, positions of the micro-lenses relative to corresponding pixels varying based upon distances of the pixels from a central optical of the image sensor to eliminate vignetting of micro-lenses; the micro-lenses being divided into

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rectangular blocks (Figure 1) and within at least one of the blocks the position of which is varied by an equal amount (col. 3, line 8 – col. 4, line 2).

With respect to claims 29 and 32, Kato all of the claimed figures and further discloses that the sensor may be that of a CCD which is a camera.

With respect to claim 38, the method is inherent to the apparatus.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 15, 20, 23, 24 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kato (5,682,203) in view of Brown (6,373,633).

With respect to claims 15, 24 and 33, Kato is silent as to the blocks being tessellated to form a continuous array of micro-lenses. Brown discloses an imaging device wherein the blocks of micro-lenses are tessellated. It would have been obvious for one of ordinary skill in the art to modify the sensor of Kato to include a micro-lens structure as taught in Brown to better utilize by providing a 100 percent fill factor, thus enhancing the decrease in vignetting.

Claims 15, 20, 23, 24 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kato (5,682,203).

With respect to claims 20 and 23, Kato discloses all of the claimed features with the exception of a display cooperating with the image sensor to display images. It would have been obvious for one of ordinary skill in the art to include display as a means of monitoring the image to determine if the image is clear and undistorted.

***Allowable Subject Matter***

Claims 12, 13, 21, 22, 30, 31, 39 and 40 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephone B. Allen whose telephone number is (571) 272-2434. The examiner can normally be reached on Mon-Thurs from 0900-1700.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave P. Porta can be reached on (571) 272-2444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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A handwritten signature in black ink, appearing to read "Stephone B. Allen". The signature is fluid and cursive, with the first name "Stephone" being more prominent than the last name "Allen".

Stephone B. Allen  
Primary Examiner  
Art Unit 2878

sba